

Competency 1	Competency 2	Course Title	Course Number	Instructors	Course description from courses.yale.edu/
Biological & Environmental Influences on Health		Biotechnology and the Developing World	BENG 405 Same As: ENAS 805, section 01 Same As: EVST 415, section 01	Anjelica Gonzalez	Study of technological advances that have global health applications. Ways in which biotechnology has enhanced quality of life in the developing world. The challenges of implementing relevant technologies in resource-limited environments, including technical, practical, social, and ethical aspects. Prerequisite: MCDB 120, or BIOL 101 and 102.
Biological & Environmental Influences on Health		Climate Change Adaptation and Global Health	HLTH 332	Steve Whittaker	Climate change has the observable potential to increase the frequency and intensity of extreme weather events such as hurricanes, heat waves, droughts, frosts, and floods. In response, many concerned citizens, communities, scientific consortia, industries, and governments around the world have sought to adapt to climate change for the sake of global well-being. This course examines climate change adaptation as a risk management strategy; how it builds resilience where there was vulnerability. Health protective activities resulting from thoughtful, interdisciplinary approaches that consider political, commercial, and socio-cultural factors are held as the ideal among all adaptive responses. Scope includes but is not limited to dynamics in the U.S., Latin America, Asia, and the Caribbean. Throughout the semester, participants engage in lectures, discussions, interactive exercises, and collaborative presentations. Enrollment (to be capped at 18) is open to junior and senior undergraduates of Yale College, upon permission of the instructors, with preference given to Global Health Studies Scholars.
Biological & Environmental Influences on Health		Pests, Parasites, and Pathogens	EVST 251 Section 01, CRN 24011	Liza Comita Andrew Muehleisen	This course is about the hidden but immensely important role that small, opportunistic organisms play in the ecosystems all around us. While pests, parasites, and pathogens receive plenty of rightful attention regarding their direct impact on human health, we offer an ecological perspective on the myriad underappreciated ways they influence both natural and managed ecosystems, are affected themselves by our impacts on the environment, and thus affect our lives. A sample of questions we ask and explore include: Can pathogens explain why tropical forests are so diverse? How is a loss in biodiversity related to an uptick in Lyme disease? How will a changing climate affect disease transmission in wildlife and livestock? How do invasive insect herbivores impact carbon emissions from forests in the US?
Biological & Environmental Influences on Health		Evolutionary Biology	E&EB 225 Same As: E&EB 525, section 01	Alvaro Sanchez De Andres Jeffrey Powell	An overview of evolutionary biology as the discipline uniting all of the life sciences. Reading and discussion of scientific papers to explore the dynamic aspects of evolutionary biology. Principles of population genetics, paleontology, and systematics; application of evolutionary thinking in disciplines such as developmental biology, ecology, microbiology, molecular biology, and human medicine.
Biological & Environmental Influences on Health		Biology of Insect Disease Vectors *Graduate level course	E&EB 650 Section 01, CRN 23731 Same As: EMD 550, section 01 Same As: F&ES 891, section 01	Brian Weiss	Insects transmit pathogens that cause many emerging and reemerging human and agriculture-related diseases. Many of these diseases, which are referred to as neglected tropical diseases (NTDs), have a dramatically negative impact on human health in the developing world. Furthermore, they cause indirect devastation by significantly reducing agricultural productivity and nutrient availability, exacerbating poverty and deepening disparities. This course introduces students to the biological interactions that occur between major groups of important disease vectors and the pathogens they transmit. Lectures cover current research trends that relate to the ecology and physiology of insect vectors. Course content focuses on how these aspects of vector biology relate to the development and implementation of innovative and effective disease control strategies. Prerequisite: full year of college/university-level biology, or permission of the instructor.
Biological & Environmental Influences on Health		Biology of Reproduction	MCDB 250	Hugh Taylor Seth Guller	Introduction to reproductive biology, with emphasis on human reproduction. Development and hormonal regulation of reproductive systems; sexuality, fertilization, and pregnancy; modern diagnosis and treatment of reproductive and developmental disorders; social and ethical issues. BIOL 101, 102, and 103, or equivalent performance on the corresponding biological sciences placement examinations, or a score of 5 on the Advanced Placement test in Biology, or a score of 710 or above on the SAT Biology M test
Biological & Environmental Influences on Health		Microbiology	MCDB 290 Section 01, CRN 21264	Christine Jacobs-Wagner Stavroula Hatzios	Cell structure of bacteria, bacterial genetics, microbial evolution and diversity, bacterial development, microbial interaction, chemotaxis and motility, gene regulation, microbial genomics and proteomics, CRISPR, metabolism, infectious diseases, mechanisms of pathogenesis, host defense systems, viruses, gut microbiota in health and disease. Prerequisites: BIOL 101, 102, and 103, or equivalent performance on the corresponding biological sciences placement examinations; or one term of biochemistry, or cell biology, or genetics; or with permission of instructor.
Health & Societies		Health Disparities and Health Equity	ANTH 453 Section 01, CRN 24717 Same As: HLTH 425, section 01	Catherine Panter-Brick	A biocultural perspective on debates in medical anthropology and global health that focus on health disparities and equity. The intersection of biological and cultural issues in matters of health research and intervention. Application of theoretical frameworks to case studies in global health inequality.
Health & Societies		Masculinity and Men's Health	ANTH 455 WGSS 459, section 01	Marcia Inhorn	Ethnographic approaches to masculinity and men's health around the globe. Issues of ethnographic research design and methodology; interdisciplinary theories of masculinity; contributions of men's health studies from Western and non-Western sites to social theory, ethnographic scholarship, and health policy.
Health & Societies		Ethnographic Perspectives on Global Health	ANTH 462	Staff	Study of anthropological ethnographies on serious health problems facing populations in resource-poor societies. Poverty and structural violence; health as a human right; struggles with infectious disease; the health of women and children. Focus on health issues facing sub-Saharan Africa and Latin America.

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Health & Societies		Politics of Reproduction	ER&M 360 Section 01, CRN 21728 Same As: SOCY 390, section 01 Same As: HLTH 370, section 01 Same As: HSHM 432, section 01 Same As: SOCY 629, section 01 Same As: WGSS 390, section 01 Same As: WGSS 629, section 01 Same As: AMST 690, section 01	Rene Almeling	Reproduction as a process that is simultaneously biological and social, involving male and female bodies, family formation, and powerful social institutions such as medicine, law, and the marketplace. Sociological research on reproductive topics such as pregnancy, birth, abortion, contraception, infertility, reproductive technology, and aging. Core sociological concepts used to examine how the politics of reproduction are shaped by the intersecting inequalities of gender, race, class, and sexuality.
Health & Societies		Intersectionality and Women's Health	WGSS 431 Section 01, CRN 24389 Same As: ANTH 451, section 01 Same As: ANTH 651, section 01 Same As: WGSS 651, section 01	Marcia Inhorn	The intersections of race, class, gender, and other axes of "difference" and their effects on women's health, primarily in the contemporary United States. Recent feminist approaches to intersectionality and multiplicity of oppressions theory. Ways in which anthropologists studying women's health issues have contributed to social and feminist theory at the intersections of race, class, and gender.
Historical Approaches		American Energy History	AMST 236 Same As: HIST 199, section 01 Same As: EVST 318, section 01 Same As: HSHM 207, section 01 Same As: F&ES 583, section 01	Paul Sabin	The history of energy in the United States from early hydropower and coal to present-day hydraulic fracturing, deepwater oil, wind, and solar. Topics include energy transitions and technological change; energy and democracy; environmental justice and public health; corporate power and monopoly control; electricity and popular culture; labor struggles; the global quest for oil; changing national energy policies; the climate crisis.
Historical Approaches		Historical Perspectives on Global Health	ER&M 214 Section 01, CRN 24044 Same As: HSHM 212, section 01 Same As: HIST 146, section 01 Same As: HLTH 280, section 01	Tess Lanzarotta	In the 21st century "global health" is recognized as an influential framework for orienting action among a huge range of groups including public health workers, activists, philanthropists, economists, political leaders, and students. How did this come to pass? This survey class introduces you to the historical circumstances that have contributed to the contemporary landscape of global health. We travel through several centuries to examine how ideas about disease, colonialism, race, gender, science, diplomacy, security, economy, and humanitarianism have shaped and been shaped by attempts to negotiate problems of health that transcend geopolitical borders.
Historical Approaches	Performance Representation & Health	Indigenous Peoples, Colonial Science	ER&M 352 Section 01, CRN 24470	Tess Lanzarotta	In this class, we explore Indigenous peoples' historical encounters with colonial science, medicine, and technology. When white settlers arrived in the territories of Indigenous peoples, they characterized Indigenous bodies, communities, and subjectivities in specific ways that were intended to justify the elimination, assimilation, and dispossession of Indigenous peoples. One of our aims in this class is to understand the roles that scientific knowledge, practices, and values played (and continue to play) in these colonial processes. However, at the same time, Indigenous peoples have contested and resisted the claims made by colonial scientists and physicians, used science, medicine, and technology to express and extend their sovereignty, and consistently asserted the power and value of their own knowledge systems. Throughout the class, we discuss how these negotiations have taken show and consider how they can inform and complicate our sense of the relationship between science and indigeneity. Students are exposed to "classic" academic debates, like the "Virgin Soil Epidemics" theory, but also to Indigenous critiques of Euro-American scientific traditions, like the contemporary ethical issues surrounding the use and reuse of biological specimens collected from Indigenous communities.
Historical Approaches	Performance Representation & Health	Race and Disease in American Medicine	HIST 128J HSHM 475, section 01	Sakena Abedin	An exploration of the history of race and disease in American medicine from the late 19th century to the present, focusing on clinical practice and clinical research. We discuss cancer, psychiatric disease, sickle cell disease, and infectious diseases including tuberculosis and HIV. We examine the role of race in the construction of disease and the role of disease in generating and supporting racial hierarchies, with special attention to the role of visibility and the visual in these processes. We also consider the history of race and clinical research, and the implications of racialized disease construction for the production of medical knowledge.
Historical Approaches	Performance Representation & Health	Cultural History of Mental Illness in America	HIST 143J Section 01, CRN 21074	Staff	Exploration of the meanings attributed to black-white differences in health from the late-nineteenth century to the present with an emphasis on the mutual construction of race and health/disease. Topics include specific diseases, (cancer, heart disease, tuberculosis, HIV) as well as health activism, 'health disparities' research, and genomics.
Historical Approaches	Health & Societies	Reproductive Health, Gender & Power in the U.S.	HIST 176J Section 01, CRN 24383 Same As: HSHM 465, section 01 Same As: WGSS 457, section 01	Ziv Eisenberg	This seminar examines women's and men's reproductive health in the United States from the 19th century to the present. How have gender norms and social power structures shaped medical knowledge, scientific investigation, political regulation, and private reproductive experiences? What do the lessons of the history of reproductive health tell us about contemporary policy, legal and economic debates? Topics include abortion, activism, childbirth, contraceptives, eugenics, feminism, fertility, medicalization, pregnancy, reproductive science and technology, sexual health, social justice, and sterilization.

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Performance Representation & Health		Introduction to Critical Refugee Studies	AMST 206 Same As: ER&M 221, section 01 Same As: WGSS 222, section 01	Quan Tran	Reconfiguring refugees as fluid subjects and sites of social, political, and cultural critiques. Departing from dominant understandings of refugees as victims, consideration instead of refugees as complex historical actors, made visible through processes of colonization, imperialism, war, displacement, state violence, and globalization, as well as ethical, social, legal, and political transformations. Focus on second-half of the twentieth century.
Performance Representation & Health		The Migrant Image	AFAM 256 / FILM 399, section 01 / HSAR 329, section 01	Rizvana Bradley	Cinematic as well as post-cinematic representation of both the migrant and the immigrant body; authorship of the anticolonial struggle. Focus on migrants, refugees, and immigrants, and the emergence of the "global citizen" with respect to digital artistic practices. Prerequisites: FILM 150 or 160; or permission of instructor.
Performance Representation & Health		American Culture and the Rise of the Environment	AMST 425 Same As: ENGL 430, section 01 Same As: EVST 430, section 01	Michael Warner	U.S. literature from the late eighteenth century to the Civil War explored in the context of climate change. Development of the modern concept of the environment; the formation and legacy of key ideas in environmentalism; effects of industrialization and national expansion; utopian and dystopian visions of the future.
Performance Representation & Health		Race, Politics, and the Law	AMST 324 PLSC 262, section 01	Daniel HoSang	Examination of how race—as a mode of domination and resistance—has developed and transformed in the United States since the early-twentieth-century. How political actors and social movements engage the law to shape visions of freedom, democracy, and political life. Consideration of critical race theory, political discourse analysis, intersectionality and women of color feminism, and American political development.
Political Economy & Governance in Health		Comparative Colonialisms	AMST 361 Section 01, CRN 24606 Same As: ER&M 322, section 01	Lisa Lowe	In this interdisciplinary seminar, students examine several historical and ongoing modes of colonialism—settler colonialism, slavery, and overseas empire, as well as their various contestations—approaching the study through readings in history, anthropology, political economy, literature, arts, and other materials. We discuss questions such as: In what ways are settler colonialism, slavery, and empire independent, and in what ways do they articulate with one another? How have colonialisms been integral to the emergence of the modern U.S. nation-state and economy? How does one read the national archive and engage the epistemology of evidence? What are the roles of cultural practices, narrative, and visual arts in countering colonial power?
Political Economy & Governance in Health		Economics, Addiction, and Public Policy	ECON 461	Jody Sindelar	Smoking, alcoholism, illicit drugs, and obesity studied from economic and policy perspectives. Focus on causes of and solutions to problems. After introductory microeconomics.
Political Economy & Governance in Health		Equality	ECON 473	John Roemer	Egalitarian theories of justice and their critics. Readings in philosophy are paired with analytic methods from economics. Topics include Rawlsian justice, utilitarianism, the veil of ignorance, Dworkin's resource egalitarianism, Roemer's equality of opportunity, Marxian exploitation, and Nozickian procedural justice. Some discussion of American economic inequality, Nordic social democracy, and the politics of inequality. Recommended preparation: intermediate microeconomics.
Political Economy & Governance in Health		Environmental Politics and Law	F&ES 255 Section 01, CRN 22392 Environmental Politics and Law Same As: EVST 255, section 01 Same As: PLSC 215, section 01	John Wargo	Exploration of the politics, policy, and law associated with attempts to manage environmental quality and natural resources. Themes of democracy, liberty, power, property, equality, causation, and risk. Case histories include air quality, water quality and quantity, pesticides and toxic substances, land use, agriculture and food, parks and protected areas, and energy.
Political Economy & Governance in Health		Philosophy of Science for the Study of Politics	EP&E 299 Section 01, CRN 21458 Same As: PLSC 332, section 01 Same As: PLSC 509, section 01	Hélène Landemore	An examination of the philosophy of science from the perspective of the study of politics. Particular attention to the ways in which assumptions about science influence models of political behavior, the methods adopted to study that behavior, and the relations between science and democracy. Readings include works by both classic and contemporary authors.
Political Economy & Governance in Health		Causes, Consequences, and Policy Implications of Global Economic Inequality	GLBL 335 Section 01, CRN 23900	Murray Leibbrandt	Investigation of the causes and consequences of economic inequality and how the persistence of inequality arises. Mechanisms include financial markets, credit and savings, health, education, globalization, social networks, and political processes. Study of theoretical and empirical literature; possible policy interventions; and country-level case studies. Prerequisite: introductory microeconomics.
Political Economy & Governance in Health		The Politics of American Public Policy	PLSC 214 Section 01, CRN 24111	Jacob Hacker	Public policy in the United States and the methodological and theoretical tools used to study the forces that shape it. Economic and political science perspectives on the policy process and contemporary American governance. Domestic policy issues such as health care, economic inequality, job insecurity, the federal debt, environmental protection, criminal justice, financial regulation, and primary and higher education.
Political Economy & Governance in Health	Health & Societies	Poverty and Social Welfare Policy in the United States	SOCY 341 Section 01, CRN 21720	Lloyd Grieger	Formation and effectiveness of anti-poverty policies from a sociological and public policy perspective. Consideration of who is poor and who deserves federal assistance. Topics include: origins of the modern social safety net; the federal government's role in constructing and implementing anti-poverty policy; realities of low-wage work; the "culture of poverty;" and employment- and family-based policy strategies for alleviating poverty. Applied understanding of quantitative social science research methods is helpful, but not required.

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Understanding & Interpreting Quantitative Data		Data Science for Politics and Policy	EVST 454 Same As: PLSC 454, section 01	Fredrik Sävje	Data plays an increasingly important role in policy making and politics. The ability to draw valid conclusions from quantitative information can tilt elections or be the difference between a successful or failed policy. This course teaches how to use tools from statistics, data science, and machine learning to solve problems and challenges faced in policy making and politics. Students learn how data can help people make campaign decisions, detect election fraud, predict election outcomes, and investigate if a policy had the intended effect. Students receive an introduction to statistical programming in R, supervised and unsupervised machine learning, and causal inference.
Understanding & Interpreting Quantitative Data	Biological & Environmental Influences on Health	Epidemiology and Public Health	HLTH 240 Section 01, CRN 23713 Same As: GLBL 193, section 01	Marney White	A general introduction to epidemiology and the field of public health. Methods of epidemiological investigation, research, and practice. Emphasis on study design and the skills necessary for the conduct of mentored field research. Priority to Global Health Fellows.
Understanding & Interpreting Quantitative Data		YData: An Introduction to Data Science	S&DS 123 Section 01, CRN 22333 Same As: S&DS 523, section 01	John Lafferty	Computational, programming, and statistical skills are no longer optional in our increasingly data-driven world; these skills are essential for opening doors to manifold research and career opportunities. This course aims to dramatically enhance knowledge and capabilities in fundamental ideas and skills in data science, especially computational and programming skills along with inferential thinking. YData is an introduction to Data Science that emphasizes the development of these skills while providing opportunities for hands-on experience and practice. YData is accessible to students with little or no background in computing, programming, or statistics, but is also engaging for more technically oriented students through extensive use of examples and hands-on data analysis. Python 3, a popular and widely used computing language, is the language used in this course. The computing materials will be hosted on a special purpose web server.
Understanding & Interpreting Quantitative Data		Introductory Statistics, Intensive	S&DS 220 Section 01, CRN 21643 Introductory Statistics, Intensive Same As: S&DS 520, section 01	Xiaofei Wang	Introduction to statistical reasoning for students with particular interest in data science and computing. Using the R language, topics include exploratory data analysis, probability, hypothesis testing, confidence intervals, regression, statistical modeling, and simulation. Computing taught and used extensively, as well as application of statistical concepts to analysis of real-world data science problems. MATH 115 is helpful, but not a required.
Understanding & Interpreting Quantitative Data		Data Exploration and Analysis	S&DS 230 Section 02, CRN 21644 Same As: PLSC 530, section 02 Same As: S&DS 530, section 02 Same As: PLSC 530, section 02	Jonathan Reuning-Scherer	Survey of statistical methods: plots, transformations, regression, analysis of variance, clustering, principal components, contingency tables, and time series analysis. The R computing language and Web data sources are used. Prerequisite: a 100-level Statistics course or equivalent, or with permission of instructor.
Understanding & Interpreting Quantitative Data		Data Analysis	AMTH 361 Section 01, CRN 21652 Same As: S&DS 361, section 01 Same As: S&DS 661, section 01	William Brinda	Selected topics in statistics explored through analysis of data sets using the R statistical computing language. Topics include linear and nonlinear models, maximum likelihood, resampling methods, curve estimation, model selection, classification, and clustering.
Understanding & Interpreting Quantitative Data		Introductory Statistics	S&DS 100 Section 01, CRN 21642 Same As: S&DS 500, section 01	William Brinda	An introduction to statistical reasoning. Topics include numerical and graphical summaries of data, data acquisition and experimental design, probability, hypothesis testing, confidence intervals, correlation and regression. Application of statistical concepts to data; analysis of real-world problems. May not be taken after S&DS 101–106 or 109.
Understanding & Interpreting Quantitative Data	Political Economy & Governance in Health	Political Epidemiology	EMD 582 01 / GLBL 716 01	Gregg Gonsalves	Political epidemiology is the study of the impact of welfare regimes, political institutions, and specific policies on health and health equity. This course emphasizes the last among these—the effects of specific policies—on health outcomes in infectious diseases and other areas of human health and development. The course takes an issues- and methods-based approach, looking at how to evaluate the effects of political determinants of health (e.g., immigration, education, fiscal and environmental policies) through experimental and quasi-experimental methods, as well as various techniques associated with policy modeling (e.g., Markov models, systems dynamics, microsimulation, spatial models). Prerequisites: BIS 505 (Introduction to Statistical Thinking) or a similar introductory course in statistics is required. STAT 241/541, Math 241 (Probability Theory) or a similar introductory course in probability is highly recommended but not required. If you have never had a course in probability, then MIT OpenCourseWare has an Introduction to Probability and Statistics course, in which the first section (lectures 1-7) focuses on basic concepts in probability, and is worth reviewing on your own: https://ocw.mit.edu/courses/mathematics/18-05-introduction-to-probability-and-statistics-spring-2014/index.htm